

REMARKS

Initially, Applicant respectfully acknowledges that the Examiner has indicated that claim 2 is allowed.

Claims 1-14 are in the application. Claims 1 and 2 have been amended for clarification, and claims 3-14 have been added for consideration. No new matter is introduced by this claim addition. In this regard, the Examiner's attention is directed to, inter alia, Fig.1 of Applicant's application.

Reconsideration of the rejection and allowance of the pending application in view of the foregoing amendments and following remarks are respectfully requested.

In the Office Action, claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Asakura et al., U.S. Patent No. 6,681,018 (hereinafter "Asakura") and Yoshida, U.S. Patent No. 5,321,671. This rejection is respectfully traversed.

Independent claim 1 has been amended to more clearly define a feature of the invention and to more clearly distinguish over the applied prior art references by further defining the configuration of the resistors. No new matter is introduced by this amendment.

A channel down mixing apparatus for a car audio system of the presently claimed embodiment, as recited in amended claim 1, includes a channel down mixing function for down mixing a sub-woofer signal to an L (left) channel and an R (right) channel when a user does not select a sub-woofer speaker on/off signal terminal. The channel mixing apparatus further includes, inter alia, a pair of buffers that amplify an L channel input signal and an R channel input signal to a designated gain, respectively, in which a resistor is serially provided before each respective buffer, a pair of FETs that mix the sub-woofer

signal with the L channel input signal and the R channel input signal when the user does not select the sub-woofer speaker on/off signal terminal, and output a mixed signal to each of the buffers, a pair of parallel resistors connected in parallel to the serial resistors that are inserted between an output end of each of the FETs and an input end of each of the buffers, a first transistor configured to be turned on when the user turns on the sub-woofer speaker on/off signal terminal, and a second transistor and a third transistor, which are configured to be turned off when the first transistor is turned on and turned off when the first transistor is turned on, thereby reducing the L channel input signal and the R channel input signal to a designated level, respectively.

Applicant respectfully submits that the references relied upon in the rejection under 35U.S.C. 103(a), considered singly or in any proper combination, do not disclose such a combination of features. In particular, the configuration of the resistors as recited in amended claim 1 is not disclosed in either of the applied references.

For example, in the present embodiment, a pair of buffers B2 and B3 that amplifies an L (left) channel input signal ILCH and an R (right) channel input signal IRCH to a designated gain, in which a resistor R1 or R4 is serially inserted before the respective buffers B2 and B3, and a pair of parallel resistors R2 and R3 are connected in parallel to the serial resistors R1 and R4 that are inserted between an output end of each of the FET and an input end of each of the buffers B2 and B3.

In comparison, Asakura not only does not disclose the first, second and third transistors as recited in amended claim 1, but also does not disclose any resistors configured as recited above. Yoshida also does not disclose the resistors as recited above. Therefore, even assuming, arguendo, that the teachings of Asakura and Yoshida can be

properly combined, the asserted combination of Asakura and Yoshida would not result in the invention as recited in dependent claim 1. Thus, the rejection of claim 1 under 35 U.S.C. §103 (a) is now moot.

Independent claims 1 and 2 are now in condition for allowance in view of the amendments and the above-noted remarks. Dependent claims 3-14 are also submitted to be in condition for allowance in view of their dependence from the allowable base claims and also at least based upon their recitations of additional features of the present invention.

It is respectfully requested, therefore, that the rejection under 35 U.S.C.103(a) be withdrawn and that an early indication of the allowance thereof be given.

Any amendments to the claims which have been made in this amendment, and which have not been specifically noted to overcome a rejection based on prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to be attached thereto.

Based on the above, it is respectfully submitted that this application is now in condition for allowance, and a Notice of Allowance is respectfully requested.

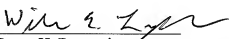
#### COMMENTS ON REASONS FOR ALLOWANCE

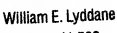
In regard to the Examiner's indication of allowable subject matter in claim 2 on page 4 of the Official Action, Applicant does not disagree with the Examiner's indication that the prior art fails to disclose or teach various features of these claims. However, Applicant wishes to make clear that the claims in the present application recite a combination of features, and that the patentability of these claims is also based on the

totality of the features recited therein, which define over the prior art. Thus the reasons for allowance should not be limited to those mentioned by the Examiner.

Should the Examiner have any questions or comments regarding this response, or the present application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,  
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